network Speed Dome IP Camera

User Manual

Indoor/Outdoor

Ver1.1

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1. Overview

The network Speed Dome IP Camera transmits digital video and audio data using wire connection. Live video can be monitored and recorded from window-based computer via network.

The video encoder supports real-time Main Profile H.264 Full HD resolution. Simultaneous dual streams, H.264/H.264 and H.264/MJPEG, are available for various network applications via speeding or limited bandwidth. Better image quality and high resolution are delivered by IP support. It eliminates the "combing" effect due to scene change and performs more stabilized image.

With IP solution, multiple and authorized users can view the immediate image from any location through network even using a standard web-browser. It enables users to access and remote the camera without at specific locations.

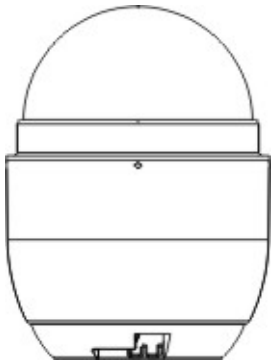
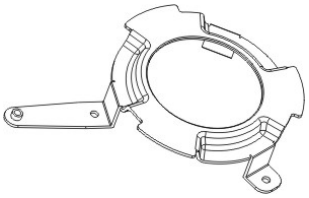
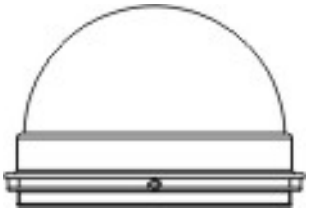
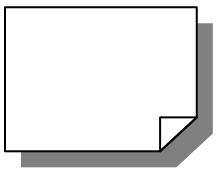
1.1 Features

- 18x, 20x Optical Zoom
- 8x Digital Zoom
- Simultaneous dual streams: H.264 and MJPEG
- Full HD Real-time Resolution
- Two-way audio support
- Removable IR Cut Filter
- Motion Detection
- Wide Dynamic Range (WDR)
- Digital Noise Reduction

1.2 Package Contents

Please check the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact your dealer for assistance.

Indoor Dome Camera Package

 Camera Body	 Hard Ceiling Mount M4 Screw (x4) Plastic Anchors (x4)	M3 Screw (x3) Fixing Plate
 Optical Cover	 Quick Guide	CD: Operation Manuals

Outdoor Dome Camera Package

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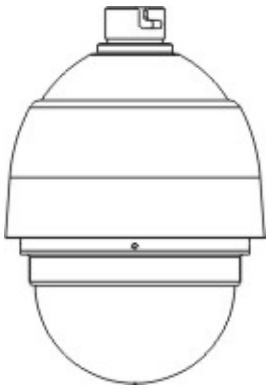
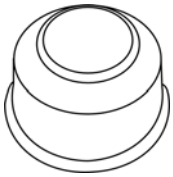
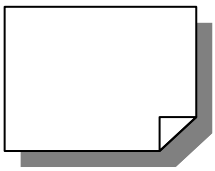
<tr><td> 
Dome Camera with
Outdoor Mount Kit</td><td colspan="2">
M3 Standard Screw (x1)
M3 Security Screw (x1)*
M5 Standard Screw (x1)
M5 Security Screw (x1)*</td></tr>
<tr><td> 
Waterproof Rubber</td><td> 
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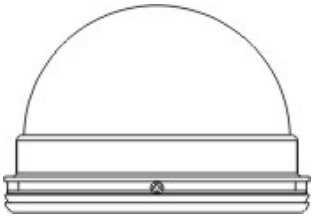
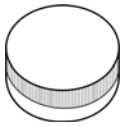
CD: Operation Manuals</td></tr>
<tr><td> 
Optical Cover</td><td> 
Lubricant</td><td>
Security Torx*</td></tr>
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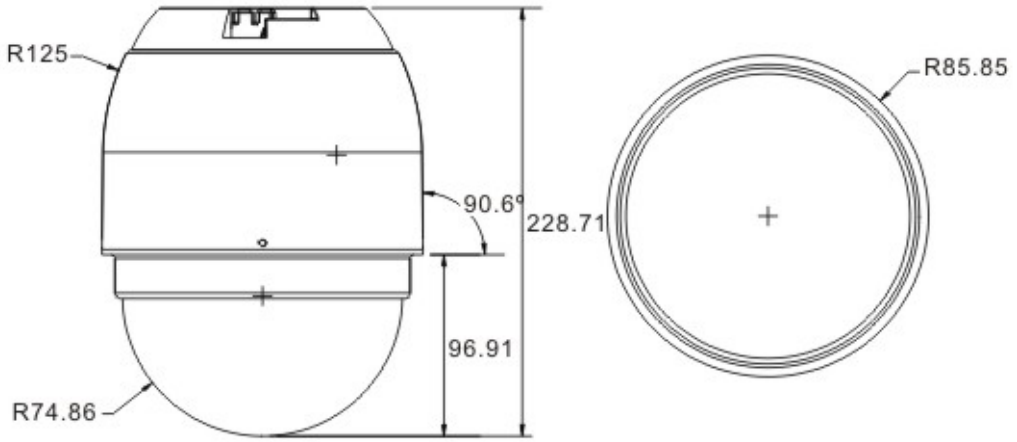
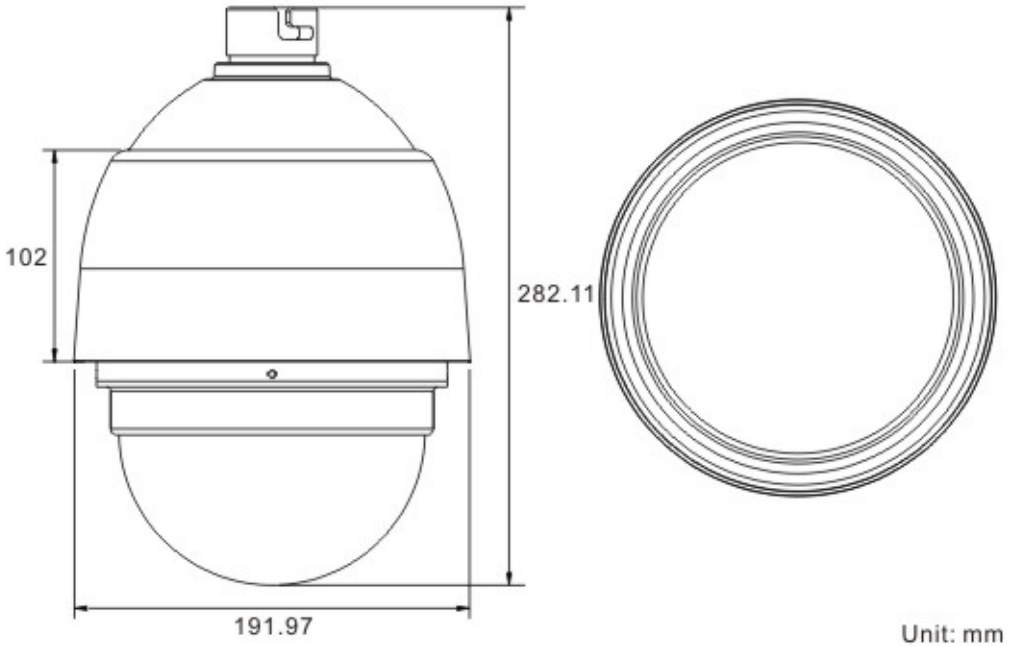
*****Optional: For Vandal Proof Cover only.

1.3 Dimensions

Indoor



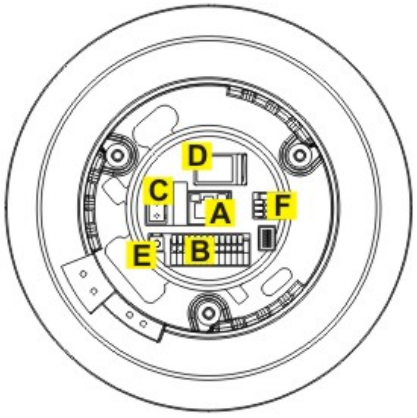
Outdoor



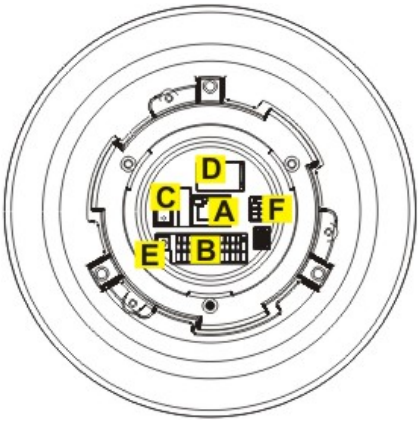
1.4 Switch/Connector Definition

There are various connectors located on the Dome Camera's back plate as shown in the figures below.

Please refer to the diagrams and tables accompanied with for use of each switch/connector.



Indoor



Outdoor

A	RJ45 Connector
B	ALARM I/O
C	Power
D	Micro SD Card Slot
E	Factory Reset Button
F	Audio I/O

NOTE: DO NOT change the network Speed Dome Camera's Communication Switch factory default settings.

2. Camera Cabling

Please follow the instructions below to complete network Speed Dome Camera connection.

2.1 Connect Power

Please refer to the illustrations below to connect power core through the supplied power adaptor.

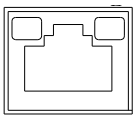
Pin	Definition
1	AC 24-
2	FG
3	AC 24+

2.2 Connect Ethernet Cable

Use of Category 5 Ethernet cable is recommended for network connection; to have best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the network Speed Dome Camera, and the other end of the cable to the network switch or PC.

NOTE: In some cases, you may need use an Ethernet crossover cable when connecting the network Speed Dome Camera directly to the PC.

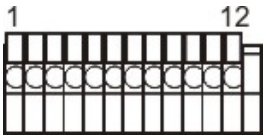
Check the status of the link indicator and activity indicator LEDs; if the LEDs are unlit, please check LAN connection.



Green Link Light indicates good network connection.
Orange Activity Light flashes for network activity indication.

2.3 Apply Alarm I/O

The network Speed Dome Camera supports 4 digital alarm inputs and 2 digital alarm output. Please make sure the alarm connections are properly wired before starting to configure alarm related settings on this “Application” page. Please refer to the pin definition table below for alarm system wiring.

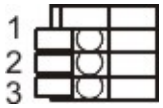


Pin	Definition
1	ALARM_IN_4
2	ALARM_IN_3
3	ALARM_IN_2
4	ALARM_IN_1
5	GND
6	ALARM_OUT_COM_2

Pin	Definition
7	ALARM_OUT_NC_2
8	ALARM_OUT_NO_2
9	GND
10	ALARM_OUT_COM_1
11	ALARM_OUT_NC_1
12	ALARM_OUT_NO_1

2.4 Apply Audio

Please refer to the illustrations below to set up the audio according to the Audio pin definition.



Pin	Definition
1	LINE_OUT
2	GND
3	LINE_IN

3. System Requirements

To perform the network Speed Dome Camera via web browser, please ensure your PC is in good network connection, and meet system requirement as described below.

Items	Minimum Requirement
Personal Computer	1. Intel® Pentium® IV, 3 GHz or higher, Intel® Core2 Duo, 2 GHz or higher 2. 1 GB RAM or more 3. AGP graphics card 64 MB RAM, DirectDraw
Operating System	Windows VISTA/ Windows XP/ Windows 7
Web Browser	Internet Explorer 6.0 or later, Firefox, Chrome, Safari
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation
Viewer	ActiveX control plug-in for Microsoft IE

4. Access Camera

For initial access to the network Speed Dome Camera, users can search the camera through the installer program: DeviceSearch.exe, which can be found in “DeviceSearch” folder in the supplied CD.

Device Search Software Setup

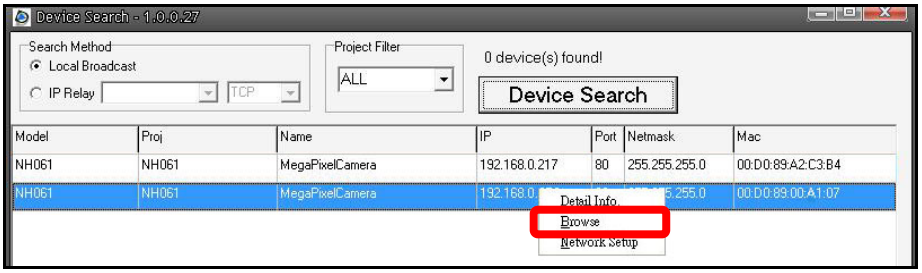
Step 1: Double click on the program Device Search.exe. After its window will appear, click the <Device Search> button on the top side.

Step 2: The security alert window will pop up. Click <Unblock> to continue.

Device Search

Step 3: Click <Device Search> again, and all the finding IP devices will be listed in the page. The network Speed Dome Camera’s default IP address is: **192.168.0.250**.

Step 4: Double click or right click and select <Browse> to access the camera directly via web browser.



Step 5: Then the prompt window of request for entering default username and password will appear for logging in to the network Speed Dome Camera.

The default login ID and password for the Administrator are:

Login ID	Password
Admin	1234

NOTE: ID and password are case sensitive.

NOTE: It is strongly advised that administrator’s password be altered for the security concerns. Refer to network Speed Dome IP Camera Menu Tree for further details.

Additionally, users can change the network Speed Dome Camera's network property, either DHCP or Static IP directly in the device finding list. Refer to the following section for changing the network Speed Dome Camera's network property.

Example of Changing IP Camera's Network Property

Users can directly change a Network Speed Dome Camera's network property, ex. from static IP to DHCP, in the finding device list. The way to change the camera's network property is specified below:

Step 1: In the finding device list, click on the network Speed Dome Camera that you would like to change its network property. On the selected item, right click and select <Network Setup>. Meanwhile, record the network Speed Dome Camera's MAC address, for future identification.

Step 2: The <Network Setup> page will come out. Select <DHCP>, and click on <Apply> button down the page.

Step 3: Click <OK> on the Note of setting change. Wait for one minute to re-search the network Speed Dome Camera.

Step 4: Click the <Device Search> button to re-search all the devices. Then select the network Speed Dome Camera with the correct MAC address. Double click on the IP Camera, and the login window will come out.

Step 5: Enter User name and Password to access the network Speed Dome Camera.

Installing DC Viewer Software Online

For the initial access to the network Speed Dome Camera, a client program, DC Viewer, will be automatically installed to your PC when connecting to the network Speed Dome Camera.

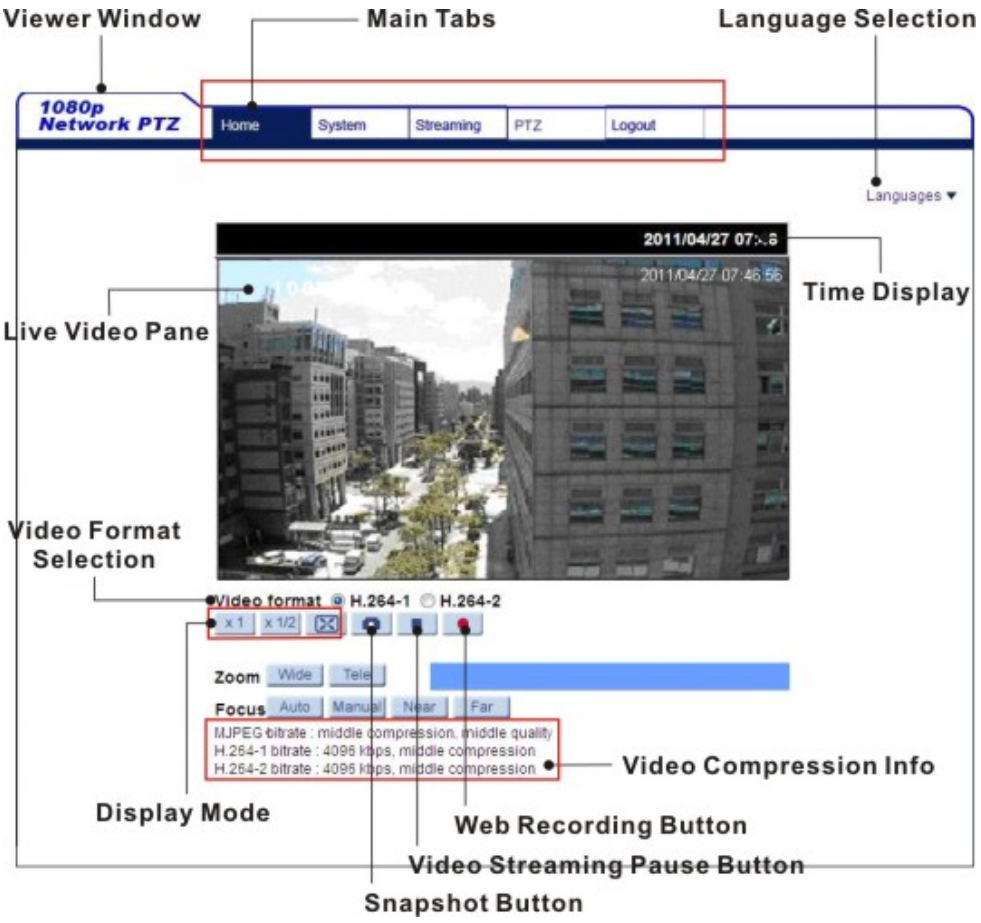
If the Web browser doesn't allow DC Viewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (refer to Internet Security Settings) to continue the process.

The Information Bar (just below the URL bar) may come out and ask for permission to install the ActiveX Control for displaying video in browser. Right click on the Information Bar and select <Install ActiveX Control…> to allow the installation. Then the security warning window will pop up. Click <Install> to carry on software installation.

Click <Finish> to close the DC Viewer window when download is finished. For the detailed software download procedure, please refer to DC Viewer Download Procedure.

NOTE: If the Live Video Pane on Home Page can not be shown for users who have installed the DC Viewer in the PC previously. Please refer to Upgrade the DC Viewer.

Once login to the network Speed Dome Camera, users will see the Home page as shown below:

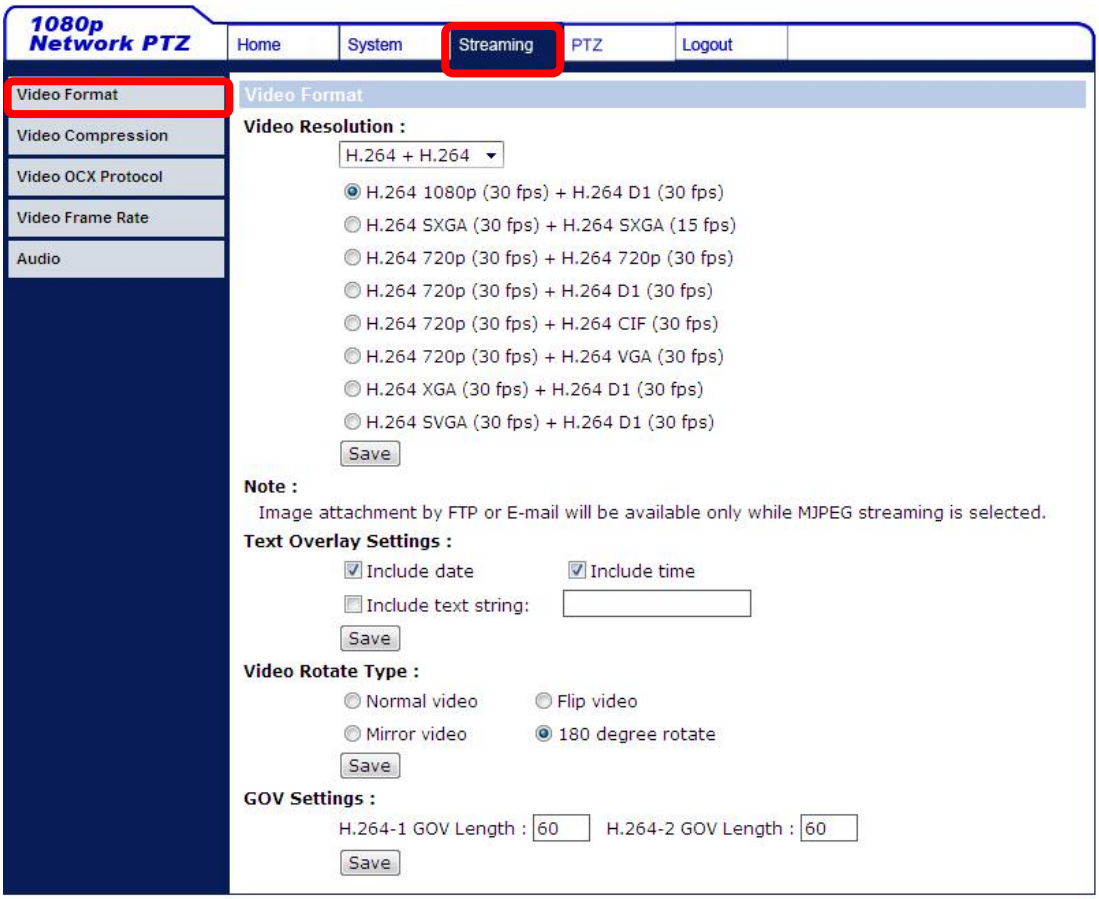


NOTE: Refer to network Speed Dome IP Camera Menu Tree for further button/ function details.

5. Setup Video Resolution

Users can setup Video Resolution on Video Format page of the user-friendly browser-based configuration interface.

Video Format can be found under this path: **Streaming> Video Format**.



- **Video Format**
  Under Video Resolution section, select a preferred resolution setting. The available Video Resolution for MJPEG & H.264 format includes:

H.264 + MJPEG	H.264 1080p (30fps) + MJPEG D1 (30fps)
	H.264 720p (30fps) + MJPEG 720p (30fps)
	H.264 720p (30fps) + MJPEC D1 (30fps)
	H.264 720p (30fps) + MJPEG CIF (30fps)
	H.264 720p (30fps) + MJPEG VGA (30fps)
	H.264 XGA (30fps) + MJPEG D1 (30fps)
	H.264 SVGA (30fps) + MJPEG D1 (30fps)
MJPEG	MJPEG 1080p (30fps)
	MJPEG SXGA (30fps)
	MJPEG XGA (30fps)

	MJPEG SVGA (30fps)
H.264 + H.264	H.264 1080p (30fps) + H.264 D1 (30fps)*
	H.264 SXGA (30fps) + H.264 SXGA (15fps)
	H.264 720p (30fps) + H.264 720p (30fps)
	H.264 720p (30fps) + H.264 D1 (30fps)
	H.264 720p (30fps) + H.264 CIF (30fps)
	H.264 720p (30fps) + H.264 VGA (30fps)
	H.264 XGA (30fps) + H.264 D1 (30fps)
	H.264 SVGA (30fps) + H.264 D1 (30fps)

(*) Default

Click <Save> to confirm the setting.

NOTE: Refer to network Speed Dome IP Camera Menu Tree for further function details.

Appendix A: Technical Specifications

Items		18N1	20N1
CAMERA			
Sensor		1/2.8” Sony Progressive Scan CMOS Sensor	
Optical Zoom		18X	20X
Digital Zoom		1~8x variable	
Focal Length		4.7~84.6 mm	4.7~94 mm
Focus Mode		Auto / Manual	
White Balance		Auto/ Indoor/ Outdoor/ ATW	
Iris Control		Auto / Manual	
Electronic Shutter		1/30 ~ 1/10k sec.	
AGC control		Auto / Manual	
Back Light		On / Off	
OPERATION			
Pan Travel		360° endless	
Tilt Travel		-10° ~ 190°	
Manual Speed		0.5° ~ 90°/s	
Presets		256	
Preset Accuracy		0.225°	
Preset Speed		5°~400°/s	
Sequence		8	
Auto Pan		4	
Cruise		8	
Privacy Mask		16	
Proportional Pan & Tilt		On/Off (Pan and tilt speed proportional to zoom ratio)	
Resume after Power loss		Yes	
Zone Title		16	
Home Function		Preset, Sequence, Auto pan, Cruise	
Auto Flip		Digital / Mechanical / Off	
Digital Slow Shutter		On / Off	
Motion Detection		On / Off	
Wide Dynamic Range		On / Off	
Day/Night: IR Cut Filter		Auto / Manual	
Image Inverse		On / Off	
Image Freeze		On / Off	
Noise Reduction	**2D**	On / Off	
	3D	On / Off	
NETWORKING			

Items		18N1	20N1
Video Compression		H.264 Main Profile/ MJPEG	
Video Streaming		Multiple Streams, H.264 + MJPEG/ H.264 + H.264	
Video Resolution		1080P/ 720P/ VGA/ D1	
Frame Rate		30/25 fps @ 1080P	
		60/50 fps @ 720P	
Audio Compression		G711/ G.726 ADPCM/AAC	
Audio Streaming		Two-way	
Interface		10/100 Mb Ethernet (RJ-45)	
Protocol		IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, IEEE 802.1x, ONVIF	
Digital Alarm Input		4	
Digital Alarm Output		2	
Alarm Reaction		Preset, Sequence, Auto pan, Cruise	
Security		User Account and Password Protection	
Supported Web Browser		Internet Explorer (6.0+), Chrome, Firefox, Safari	
GENERAL			
Environment		Indoor / Outdoor	
Operating Temperature	NH720	0°C ~ 40°C (32°F ~ 104°F)	
	NH820	-45°C ~ 50°C (-49°F ~ 122°F)	
Dimension	NH720	⌀171.7 x 228.71 mm (⌀ 6.76 x 9 Inches)	
	NH820	⌀191.97 x 282.11 mm (⌀ 7.55 x 11.1 Inches) w/ sunshield	
Weight	NH720	1.62 kg (3.57 lbs)	
	NH820	2.32 kg (5.11 lbs) w/ sunshield	
Power Source	NH720	PoE+/ AC24V ± 10%	
	NH820	AC24V ± 10%	
Power Consumption	NH720	20 W	
	NH820	65 W (with Heater)	
Regulatory		CE, FCC, RoHS, IP66 (NH820 series)	

Appendix B: Delete the Existing DC Viewer

For users who have installed the DC Viewer in the PC previously, please first remove the existing DC Viewer from the PC before accessing to the network Speed Dome Camera.

Deleting the DC Viewer

Activate <Control Panel>, and then double click <Add or Remove Programs>. In the <Currently installed programs> list, select <DCViewer> and click the button <Remove> to uninstall the existing DC Viewer.

Deleting Temporary Internet Files

To improve browser performance, it is suggested to clean up the all the files in the Temporary Internet Files.

The procedure is as follows:

Step 1: Click the <Tools> tab and select the option <Internet Options>.

Step 2: Click on <Delete> button under <Browsing history> section. Then click on the <Delete Files> button under the <Temporary Internet files> section.

A confirmation window will pop up. Click <Yes> to start deleting the files.

Appendix C: Setup Internet Security

If ActiveX control installation is blocked, please either set Internet security level to default or change ActiveX controls and plug-ins settings.

Internet Security Level: Default

Step 1: Start the Internet Explorer (IE).

Step 2: Click the <Tools> tab on the menu bar and select <Internet Options>.

Step 3: Click the <Security> tab, and select <Internet> zone.

Step 4: Down the page, click on the <Default Level> button and click <OK> to confirm the setting. Close the browser window, and restart a new one later to access the network Speed Dome Camera.

ActiveX Controls and Plug-ins Settings

Step 1: Repeat **Step 1~3** of the previous section above.

Step 2: Down the page, click on the <Custom Level> button to change ActiveX controls and plug-ins settings. The Security Settings window will pop up.

Step 3: Under <ActiveX controls and plug-ins>, set **ALL** items (as listed below) to <Enable> or <Prompt>. Please note that the items vary by IE version.

ActiveX controls and plug-ins settings:

1. Allow previously unused ActiveX controls to run without prompt.
2. Allow Scriptlets.
3. Automatic prompting for ActiveX controls.
4. Binary and script behaviors.
5. Display video and animation on a webpage that does not use external media player.
6. Download signed ActiveX controls.
7. Download unsigned ActiveX controls.
8. Initialize and script ActiveX controls not marked as safe for scripting.
9. Run ActiveX controls and plug-ins.
10. Script ActiveX controls marked safe for scripting.

Step 4: Click <OK> to accept the settings and close the Security Settings window.

Step 5: Click <OK> to close the Internet Options screen.

Step 6: Close the browser window, and restart a new one later for accessing the network Speed Dome Camera.